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ABSTRACT

BFRL Fire Publications, 1993 contains references to the publications prepared by the members of the Building and Fire Research Laboratory (BFRL) fire research staff, by other National Institute of Standards and Technology (NIST) personnel for BFRL, or by external laboratories under contract or grant from the BFRL during the calendar year 1993. Building program staff citations will appear in a combined publication entitled *Building and Fire Research Laboratory Publications, 1993;* it will be published later.

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1. Author Index Arranged by First Author

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1. Atreya, A.
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Michigan State Univ., East Lansing
NIST-GCR-93-621; Annual Progress Report; 28 p. April 1993.
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PB93-198893
porous solids; extinguishment; diffusion flames; fire extinguishing; fire suppression; flame spread; droplets; water; infrared photography; polymethylmethacrylate

B

2. Babrauskas, V.
Bench-Scale Predictions of Mattress and Upholstered Chair Fires: Similarities and Differences.
National Institute of Standards and Technology, Gaithersburg, MD
NISTIR 5152; 22 p. March 1993.
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PB93-186005
mattresses; upholstered furniture; fire hazards; fire tests; heat release rate; scaling; fire spread; prisions

3. Babrauskas, V.
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Journal of Fire Protection Engineering, Vol. 5, No. 1, 35, January/March 1993.
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4. Babrauskas, V.
Specimen Heat Fluxes for Bench-Scale Heat Release Rate Testing.
National Institute of Standards and Technology, Gaithersburg, MD
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heat release; fire hazard; cone calorimeters; standards; databases; heat release rate

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Review of International Fire Risk Prediction Methods.
National Institute of Standards and Technology, Gaithersburg, MD
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Studies Assess Performance of Residential Detectors.
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smoke detectors; heat detectors; residential buildings; standards; technology utilization

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11. Chan, W. R.; Zukowski, E. E.; Kubota, T.
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California Institute of Technology, Pasadena, CA
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compartment fires; fire models; fire research; gravity current; inclined tests; room fires; smoke

12. Choi, M. Y.; Hamins, A.; Kashiwagi, T.
Simultaneous Optical Measurement of Soot Volume Fraction and Temperature.
National Institute of Standards and Technology, Gaithersburg, MD
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soot; optical measurement; volume fraction; temperature

13. Cooper, L. Y.
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vents; building fires; compartment fires; computer models; fire models; mathematical models; zone models

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Discharge of Fire Suppression Agents From a Pressurized Vessel: A Mathematical Model and Its Application to Experimental Design.
National Institute of Standards and Technology, Gaithersburg, MD
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cooling; drop sizes; droplets; evaporation; solid surfaces; water

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sprinklers; fire suppression; hazard analysis; cribs; crib fires; fire protection

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fire detection; ceilings; detector response; sprinkler response; equations; turbulence; heat transfer; case histories; data analysis

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Fire Hazard Model Developments and Research Efforts at NIST.
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halons; ozone; halon 1301; compatability; residues; storage; stability; combustion products; corrosion; elastomers; exposure

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National Institute of Standards and Technology, Gaithersburg, MD
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acoustic properties; acoustic sensors; fire detection; ionization detectors; walls; ceilings; noise (sound)

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halons; ozone; halon 1301; thermal properties; dispersions; fluid mechanics; flame extinguishment; flammable materials

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Turbulent Spray Burner for Assessing Halon Alternative Fire Suppressants.
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93-WA/HT-23;
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halons; halon 1301; in-flight fires; fire protection; air velocity; injection; nitrogen; pressure

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Validation of a Turbulent Spray Flame Facility for the Assessment of Halon Alternatives.
National Institute of Standards and Technology, Gaithersburg, MD
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halons; validation; experiments; air velocity; injection; nitrogen; air temperature

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National Fire Protection Association, Quincy, MA
NIST-GCR-93-627; 106 p. April 1993.
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National Institute of Standards and Technology, Gaithersburg, MD
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soot; health hazards; flame radiation; carbon monoxide; soot formation; flame research; smoke yield; smoke production

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Structure of Inhibited Counterflowing Nonpremixed Flames.
National Institute of Standards and Technology, Gaithersburg, MD
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halons; suppression; flame structure; methodology; flame extinguishment

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Laser-Induced Fluorescence Measurements of Formaldehyde in a Methane/Air Diffusion Flame.
National Institute of Standards and Technology, Gaithersburg, MD
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diffusion flames; formaldehyde; lasers; fluorescence

J

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Visualization of Transport Across a Horizontal Vent Due to Density and Pressure Differences.
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vents; water flow; air flow; flow visualization; experiments

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fire research; building technology; earthquakes; refrigerants; fire suppression

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information dissemination; libraries; information retrieval

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National Institute of Standards and Technology, Gaithersburg, MD
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databases; fire engineering; fire research; fire safety; information retrieval; information dissemination; manuals

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Information Transfer in the 21st Century.
National Institute of Standards and Technology, Gaithersburg, MD
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information dissemination; libraries; technology transfer

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Locating Fire Engineering Information.
National Institute of Standards and Technology, Gaithersburg, MD
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information retrieval; fire research; fire protection engineering; fire science; databases; information storage

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fire research; building technology; earthquakes; large fires; refrigerants; fire suppression

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Summaries of BFRL Fire Research In-House Projects and Grants, 1993.
National Institute of Standards and Technology, Gaithersburg, MD
NISTIR 5263; 184 p. September 1993.
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charring; combustion; fire models; fire research; flame spread; blowout fires; hazards; ignition; polymers; soot; smoke; sprinklers

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Improvement in Predicting Smoke Movement in Compartmented Structures.
National Institute of Standards and Technology, Gaithersburg, MD
Fire Safety Journal, Vol. 21, No. 4, 269-297, 19[illegible].
smoke movement; structures; fire growth; smoke transport; toxic gases; compartments; zone models; equations; buoyant flow

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Modeling Smoke Movement Through Compartmented Structures.
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enclosures; turbulent jets; flow fields; heat transfer; flow visualization; penetration

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Non-Halogenated, Flame Retarded Polycarbonate.
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aircraft interiors; fire resistant materials; test methods; fire safety; polycarbonates; cone calorimeters; flame spread; furniture calorimeters; siloxanes; heat release rate; ignition delay; char

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air movement; air conditioning; fire protection; fire safety; heating; smoke control; stairwells; ventilation systems

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Design of Smoke Control Systems for Areas of Refuge.
National Institute of Standards and Technology, Gaithersburg, MD
NISTIR 5132; March 1993.
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smoke control; refuge; elevators (lifts); evacuation; handicapped; life safety

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Design of Smoke Control Systems for Areas of Refuge.
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smoke control; refuge; elevators (lifts); evacuation; handicapped; life safety

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Method for Calculation of Elevator Evacuation Time.
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elevators (lifts); evacuation time; computer programs; people movement; time; emergencies

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evacuation; elevators (lifts); smoke control; staging areas; human beings; water; sprinklers

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Workshop on Elevator Use During Fires.
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Edward A. Donoghue Associates Inc., Salem, NY
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elevators (lifts); smoke control; evacuation; staging areas

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Zone Fire Modeling With Natural Building Flows and a Zero Order Shaft Model.
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zone models; air movement; fire models; smoke movement; stairwells

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Time Dependency in Multiple Objective Dynamic Programming.
Clemson Univ., SC
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diffusion flames; fire plumes; fire research; optical properties; Rayleigh light scattering; soot

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On Two Numerical Techniques for Light Scattering by Dielectric Agglomerated Structures.
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agglomerates; light scattering; smoke; equations

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fire tests; flooring radiant panel test; hazard assessment; radiant flux profile

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board and care homes; egress; elderly persons; evacuation; fire safety codes; handicapped; NFPA 101; residential buildings; sprinklers

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Investigation of the Thermal Stability and Char-Forming Tendency of Cross-Linked Poly(methyl methacrylate).
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polymethylmethacrylate; thermal stability; char formation; crosslinking; thermal degradation

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National Institute of Standards and Technology, Gaithersburg, MD
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crude oil; oil spills; pool fires; smoke; fire plumes

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Modeling the Ignition of Soft Furnishings by a Cigarette. Volume 3.
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cigarettes; ignition; furniture; computer models; mathematical models; pyrolysis; simulation; smoldering; substrates

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Comparison of Experimental and Computed Species Concentration and Temperature Profiles in Laminar, Two-Dimensional Methane/Air Diffusion Flames.
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